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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

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REPORT FOR THE MONTH OF MARCH, 1938.

HAVRE:

The first ten days in March had considerable snowfall and temperatures mostly below normal. Following this, much warmer weather with persistent southwesterly winds removed all snow and dried the ground so that field work was begun March 17 and continued without interruption through the 28th. One of the most severe winter storms in station experience prevailed during the last three days of the month.

During the storm the precipitation totalled 1.40 inches and 13.2 inches of snow fell. High winds caused excessive drifting, but the moisture will be of benefit to stubble fields and weedy prairie land and should prolong stream flow. A temperature of -2° was reported the night of March 31. There were some losses of livestock reported in the storm, which was particularly severe in southern Alberta, Saskatchewan, and northern Montana. Roads are still blocked in many places.

Work in the experimental field consisted of disking and harrowing fall plowing, making an early seeding of crested wheatgrass, burning weeds, and spring plowing in preparation for various early planted cereals and forages. One day's plowing in the D.L.A. project was also accomplished.

Ladak alfalfa and oats were sown on an 8 acre cleared piece of bottom land. A second low land tract was plowed and levelled. Removal of stumps and other debris was about completed on another area. Experimental feeding of calves and yearlings continues, the 2-year-olds and cow lots being closed due to calving, which is now in progress

Maximum temperature, 63°; minimum, -6°; precipitation, 1.74 inches; snowfall, 20.6 inches.

JUDITH BASIN:

The mean temperature for the month was 3° above the 29-year station average. With the exception of the first and last parts of the month temperatures were rather high. Much of the grass and fall grains began growth and showed considerable green. Precipitation was below the station average by 0.19 of an inch. This makes three consecutive months below average for the beginning of the new year. A severe 3-day blizzard hit the area on the 28th. Snow that fell in the vicinity of the station was of little or no benefit to crops, as the heavy wind cleaned fields and land free of snow. Considerable soil movement was included with the moving snow.

Fall seedings of crested wheatgrass on the "South Bench" showed excellent stands when inspected on the 23rd of the month.

When the weather was favorable large quantities of thistles were raked and burned from the rotations and odd fields. Fences are full of thistles, and further burning will be necessary.

Maximum temperature, 60°; minimum, -4°; precipitation, 0.59 inch.

HUNTLEY:

Weather and soil conditions improved gradually during the first half of March, and field work was begun on the 14th. Rain and snow began falling on the afternoon of the 16th, and storms kept the soil too wet for cultivation the remainder of the month.

The total precipitation for March was 1.53 inches, which is 0.62 inch above the 28-year station average. Coming as slow rains and wet snows which melted gradually, a large part of the precipitation entered the soil insuring ample moisture for germination and early growth of spring grains. Snow accompanied by high winds during the last week drifted badly in places. Some side roads were blocked for a day or two and traffic on the main highways was slowed up. At the close of the month the open fields were free from snow, although large drifts were present behind windbreaks and fence rows.

Winter wheat and rye made some advancement during the first half of March, but since then temperatures have been too low to encourage much plant growth.

Spring plowing for small grains was completed during the period of fair weather, and a good start was made on other methods of seed-bed preparation.

Maximum temperature, 72°; minimum, 9°; precipitation, 1.53 inches.

SHERIDAN:

Temperatures over the first two-thirds of the month were much above the seasonal average. Considerable seeding was done by some ranchers. The greater part of the Russian thistles on the station were raked and burned, and the regular seeding of grasses was sown. Over the last 10 days of the month light snow flurries were frequent and temperatures were slightly below the average for the season. Temperatures for the entire month were about 5° above the station average.

Precipitation was 0.21 inch below the station average for the month. The storm which brought heavy precipitation to some sections the last of the month consisted only of high winds in this section. Wind movement for the month just equalled the station average for March. Soil samples taken at random show moisture only to a depth of 12 to 18 inches on land cropped last year. The surface is in good condition to work as soon as the weather moderates.

Mr. Stoesz and Mr. Wayne Austin of the Soil Conservation Service were at the station during the month and made arrangements for grass plantings.

Maximum temperature, 70°; minimum, 12°; precipitation, 0.96 inch.

MANDAN:

The month of March was one of the mildest of record. It opened mild but closed cold and windy. There were several days of high wind the latter part of the month, the most since last fall. Snow during the month amounted to 2.8 inches, and practically all of it fell on the 3rd. Temperatures dropped on the 29th and the ground froze.

Field work started on the rotation plots on the 22nd, and all dead weeds were cleaned up during the week. Plowing started on the 28th and continued on the 29th. No field work has been done since that time because of the frozen condition of the ground. This delay in field work will retard the date of wheat seeding, which might have been the earliest of record.

Rain on the 28th amounted to 0.33 inch. Moisture conditions are favorable at present, and crops should start readily.

Some wheat seeding has been done in this area. The Missouri River bottoms were flooded more this spring than for a number of years.

Necessary work is being pushed in preparation for the shipping of the cooperative shelter-belt trees to cooperating farmers, which it is hoped will begin about April 10.

Maximum temperature, 65°; minimum, 2°; precipitation, 0.64 inch.

ARCHER:

The weather during March was mild with less wind than usual and a greater amount of precipitation than average. The total precipitation for the month was 0.99 inch. The 25-year average is 0.52 inch. The total precipitation thus far this year is 1.19 inches. The 25-year average for the three months (January, February, and March) is 1.03 inches.

During the last week of March high winds raised dust clouds from fallow and row-cropped land. At the station the most severe wind erosion occurred on cornland from which the crop had been harvested by lambs. Plowed fallow drifted more than other methods of fallow. Most of the cereals at the station were damaged by cold and wind during the last week of March but probably will survive.

Fifteen acres of Ceres wheat were seeded March 21 and 24. After this wheat was seeded the soil became frozen, and this condition is holding up field work at the present time. Practically all manure has been hauled to the fields.

Lambing at the station is in progress.

Station visitors were Director W.L. Quayle; State Commissioner of Agriculture, Arling Gardner; and Dr. A. D. Stoesz, Wayne Austin, and A. D. Ellison of the Soil Conservation Service.

Maximum temperature, 65°; minimum, 14°; precipitation, 0.99 inch.

NORTH PLATTE:

Weather for the month was warm and dry. Measurable precipitation fell on 6 days but the total was only 0.79 inch. This is but slightly below normal, but is the fifth consecutive deficient month, and the 5-month deficit is 47 percent. The mean temperature of 43.3° was 6.7° above normal. Low and high records were 74° and 17°. A few days of high wind and considerable soil drifting occurred during the last week.

Winter wheat has made a good survival, and high temperatures have stimulated early growth. However, favorable weather and considerable moisture will be needed to carry it past the danger of late spring killing.

Spring wheat on D.L.A. plats was seeded March 1 and had emerged March 26. Oats and barley seeded March 17-18 are sprouted but have not emerged.

Alfalfa has started growth. Wheatgrass in the canyon bottoms is greening up, but grass on the higher ground shows no signs of life. Russian thistles and kochia weeds have made a good start.

Soil sampling shows available moisture in only the first foot of cropped land and but little over two feet on fallow.

The eighth annual spring feeders' meeting will be held at the station and in North Platte May 5.

AKRON:

March passed with 1.34 inches of precipitation, well above the average of 0.78 inch. Of this 0.99 inch fell in two showers about the middle of the month, which put a relatively dry surface soil in suitable condition for spring seeding. The rest fell as even coverings of snow which largely evaporated into the air as it melted. Two of these falling within the last ten days interferred some with the orderly seeding of the spring crops on the station.

All experimental early spring seeding has been accomplished, except some increase plots on fallowed land along the highway. The oats on the rotations, the last, were seeded April 1.

While relatively low in precipitation, the winter has generally produced enough moisture to maintain winter wheat in a live condition. There has not been appreciable damage from soil blowing. A recent trip to Ovid showed winter wheat in at least 80 percent of normal stand and appearance at this time of year.

There is considerable physical evidence that March was too warm. The rains near the middle of the month and the clear mild weather have resulted in active growth of winter wheat and abnormal advancement of fruit and leaf buds of the fruit and ornamental trees and shrubs.

COLBY:

March was warm and fairly pleasant. The precipitation, which was nearly all in the form of misty rains, was practically twice the average for the month. The wind velocity was below normal, and there were no severe dust storms. On only three days was there any appreciable soil blowing. It was warm enough so that things greened up, generally. In pastures the green is almost entirely weeds so far. Thistles came up thick in most stubble fields. Temperatures in the low twenties the last two days may check the weed growth somewhat.

Winter wheat made excellent growth during the month and appears very promising at this time. There is an ample supply of moisture in the surface soil, but a deficiency in the subsoil. Summer fallow fields, in particular, are furnishing an abundance of pasture. This would be a real boon, except for the fact that many cattle are dying on wheat pasture. Almost every day we get reports of one or more deaths in herds in this vicinity.

The plowing for the spring small grains was done on the 21st. The soil was wet and worked up nicely. The spring small grains and peas were planted on the 22nd. There was ample moisture in the seedbed on all plots. None of them are up, however.

Maximum temperature, 79°; minimum, 11°; precipitation, 1.68 inches; snow, .5 inch; precipitation, 51-year average, 0.85 inch.

HAYS:

Throughout the month the weather was generally mild. Several rather high maximum temperatures were recorded, and the mean temperature was 7° above normal. No storms of any nature occurred, and only very few days of even moderately high winds. There were no dust storms, although there were several "dusty" days (March 2, 17, 21, 23, 25, 29 and 31), during which the upper air carried a large amount of dust which partly hid or dimmed the sun. The dust seemed to settle out of the upper air currents some days when there was very little wind. No soil drifting or damage occurred in this locality.

The showers during the month and the warm weather provided very favorable conditions for plant growth. Uncultivated fields and pastures are becoming green with weed growth. Buffalo grass is starting new growth.

Plum and apricot trees are in bloom, and peach buds are showing pink. Oats and barley crops seeded March 18 are now emerging very satisfactorily but are not yet up to a good stand. Winter rye growth almost covers the ground and is beginning to develop seedstalks. Rye by its color begins to show the first signs of shortage of readily available moisture.

Winter wheat has been growing all month, and it is also beginning to develop seedstalks which is much in advance of normal. On fallow the growth is 3 to 4 inches high and almost hides the ground. On early prepared wheat stubble plots, the growth is not so tall nor so heavy, but covers 50 to 60 percent of the ground. On corn stubble ground it is about the same as on early prepared wheat stubble ground. On kafir stubble ground the growth covers about 35 to 40 percent; the ground in kafir stalks, 25 to 30 per-

cent, and on late fall plowing and late disking, it is thinner and shorter and covers not to exceed 25 percent of the ground. On green manured plots the growth is the same as on fallow.

Surface soil is in fine condition for spring work.

Maximum temperature, 85°; minimum, 16°; precipitation, 1.87 inches.

GARDEN CITY:

Precipitation for the month of March, 0.94 inch, was above normal, 0.78 inch. A 0.60 inch rain fell on the night of the 27th; this is the largest rain received since September 3, 1937. The total thus far this year is 1.15 inches, and the normal is 1.75 inches.

On 17 days of the month, there was dust in the air, but only one of these could be termed "bad". A little local blowing occurred on some of the days, but most of the dust came in from other areas.

The wheat on the station is in poor condition. The plants that have come up are weak and have been injured by blowing.

Soil samples were taken on the new basin lister project, for total nitrogen and organic matter determinations.

Maximum temperature, 81°; minimum, 16°; precipitation, 0.94 inch.

TUCUMCARI:

March was warm, dry, and windy. The minimum temperature, 22°, occurred on the morning of March 31. No doubt a large percentage of peach, cherry, plum, and perhaps pear blooms were killed. On only four days of the month did the temperature fall below 30°. The maximum was 81°. Mean for the month was 4° above the long-time average.

Only 0.19 inch precipitation occurred. Fields are in excellent moisture condition, due to the favorable February snows. Ranges are greening, and fruit trees have bloomed unusually early.

Wind velocity was the third highest of any March on record. Hourly average for the month was 8.6 miles in the instrument yard and 10.0 miles in open field. During the last week averages were 11.5 and 13.1 miles, respectively. Soil blowing has been general, with many farm fields blown level within a week after listing. Station plot fields have held well, due to cultivation; two increase blocks have blown considerably, due to the fine, ashy condition of the upper soil. Roadways, tree rows, and vineyard have blown more than usual.

The month has been devoted primarily to pruning, tree planting, and watering trees. The field cultivator equipped with bull tongue shovels has been used to minimize soil blowing. No listing has been performed, but will be begun soon.

Rain and snow today, April 1, will be of great benefit. At 8 a.m. the total was 0.18 inch, and driving snow has continued all this morning. Wheat has the best prospects in years, and row crop land is in good condition so far as moisture is concerned. Soil blowing will no doubt still be a big problem, especially on fields that have already been listed.

DALHART:

Climatic and soil conditions were favorable for farming operations during the first half of the month. The February precipitation furnished sufficient soil moisture for tillage. Oats and sweetclover plots were seeded the first of the month. Oats emerged to excellent stands, but the rather frequent ground winds retarded growth and injured the seedlings.

Soil blowing, while not unusual, was bad. Tillage to check soil movement was necessary at the beginning of the month. After moisture was received on the 27th additional tillage was done on the entire station. Rye seeded for a cover crop is still holding well, except for the north part of the conifer planting where sand deposited from an adjacent farm is now starting abrasion. Winter wheat on the seedbed plots could now be considered a total failure. Winter rye on the project is likewise ready for abandonment. In spite of efforts to keep weed growth removed from the pasture, accumulations of sand have reached a near maximum for the drought, and are now leaving with high wind movement.

In addition to seasonal tillage the work has consisted in planting and watering replacement tree and shrub material.

The maximum temperature for the month was 83°; the minimum temperature was 24°; the total precipitation was 0.78 inch, which included a 4-inch snow recorded the morning of April 1. There were 17 days during which soil movement occurred. Soil blowing was especially severe on March 14 and 30.

BIG SPRING:

Climatic factors during the month of March were unusually favorable in many respects. Temperatures were exceptionally mild during the entire month, in fact the minimum has not reached the freezing point since the last part of February. The month was free from any high wind velocities and resultant soil movements; only on two occasions did the wind velocity step up, and then it did not reach excessive soil blowing proportions. A rainfall record somewhat below normal for the month was an unfavorable factor; only 0.33 inch was received in four showers as compared with a normal of 0.90 inch for the month.

Most of the wheat fields throughout the county were pastured pretty close until about April 1 when the stock was removed. Now the wheat will require rain before a normal growth can be obtained. All trees and shrubs are leafing out, and many of the early shrubs are in full bloom.

Station work has consisted of plowing and listing the spring worked plots; leveling some plots, and knifing increase fields. Other work has consisted of planting evergreens in the varietal spacing block and replacing other shrubs.

Maximum temperature, 93°; minimum, 33°; precipitation, 0.33 inch.

LAWTON:

Crop conditions across Oklahoma and Kansas are very promising. The wheat crop is much further advanced than usual at this time of year. Present conditions and estimates indicate a very early harvest. This condition also prevails at Denton, Texas. Wheat in the northern part of Oklahoma and Kansas is farther advanced than in southwestern Oklahoma except on the more fertile and productive soils.

A very general rain that varied from 1 inch to 5 inches extended across Oklahoma and Kansas and well into Nebraska on the 26th to 28th. At Lawton, 4.3 inches were recorded.

WOODWARD:

Wheat has been growing with no setbacks since the latter part of February, due to over 2 inches of precipitation in the form of snow and sleet the middle of that month. On March 8-9 a nice rain of 0.54 inch carried it along until about March 20, when distinct signs of suffering from drought began to appear. However, March 25-27 a lingering rain of 1.31 inches arrived.

Farmers have been in a quandary how to handle the situation. Wheat developed very early, and some of it began to joint the fore part of March. Ordinarily stock would be taken off at this time, but many felt the rank growth would use moisture needed later. The majority of farmers, therefore, pastured until wheat was further developed than ordinarily.

Soil moisture determinations indicate that in spite of the rank growth, moisture has not been used heavily below 2 feet and there is, therefore, a strong reserve to carry it until the early harvest that is expected. However, a few days of hot winds might conceivably desiccate the luxuriant growth before plants had time to draw on this deeper moisture. It is possible that freezing may occur. As this is written April 1st, the temperature has descended to about 32° and a light, fluffy snow is falling. The fate of the wheat crop is still distinctly in the hands of the weather man.

The redbud is now in its full beauty. Forsythia has made a richer and more lasting show this season than ever before. Narcissus and early tulips have been blooming for the past two weeks. They have not had to contend with the hard winds that are usual in March. The early and intermediate iris are blooming earlier than usual. Juneberry has already shed its petals. The golden currant is now in full bloom and fragrance.

April 2nd. - A temperature of 26° last night did no injury to wheat, but blackened buds of Spirea Vanhouttei and probably killed the few remaining peaches.

Maximum temperature, 86°; minimum, 22°; precipitation, 1.86 inches.

DICKINSON:

March weather was mostly mild and pleasant until the last three days when high winds and lower temperatures with considerable dust and snow in the air made a disagreeable ending for the month. Wind movement for the 24 hours ending March 30 was 510 miles.

Mean temperature of the month was 28.8°, this was 4.4° above normal.

Most of the precipitation fell as snow on the 4th and 5th. There were nine days on which only a trace was recorded. The soil in general was wet 8 to 12 inches by the snow and in some places much deeper, yet there were still a few spots where dry soil was reached in plowing.

Most of the snow was gone by the 15th. It melted gradually and went into the soil with little run-off except on the 12th and 13th when some water was lost on sloping fields.

Raking thistles was started on the 24th, and plowing on the rotations was started on the 27th. Tillage was stopped by the cold and blustery weather. Wheat was seeded on a few fields in the district during the mild weather.

Bulbous bluegrass was greening up on the 15th. Crested wheatgrass was showing considerable growth on the 28th. Winter wheat and winter rye were emerging on that date, but it is still uncertain how good the stands will be. The soil remained too dry in the fall for a full stand of wheat, rye, or grasses.

Visitors included M. P. Ostby, County Extension Agent, Wibaux, Mont., and Oscar Pearson, Bureau of Entomology.

Maximum temperature, 62°; minimum, -5°; precipitation, 0.40 inch; precipitation, January to March, 1.99 inches; normal for the three months, 1.64 inches.

BELLE FOURCHE:

March was abnormally warm, but there were no wide extremes in temperature, the weather being consistently mild practically all month. The mean temperature for March was 37°, which is 6° above normal. Precipitation was approximately 25 percent below average, but 0.47 inch, received in 4 inches of snow on March 24, was the first beneficial amount that has been recorded since last September. A number of showers and light snows also occurred, but none of them were heavy enough to be of any value.

The total wind movement was somewhat below normal for March, but high winds caused serious soil blowing during the early morning of March 21, and on March 30 and 31. One of the most severe wind storms in many years occurred at the end of the month, when a very high northwest wind prevailed almost continuously for three consecutive days. The average velocity for a 24-hour period was 26.8 miles per hour on March 30. This is equal to the second highest of record. The improved moisture condition of the surface soil, resulting from the snow on March 24 and a light shower on the night of March 28, prevented soil blowing during the first day of the high wind, but extensive soil movement occurred on March 30 and 31. Although the various plots for early spring crops were harrowed down the day preceding the storm, preparatory for seeding, soil drifting on the rotation field was confined to winter wheat plots.

Fall grain resumed growth about the middle of March, but was set back by soil blowing damage on March 21. Stands on rotation plots were further impaired by corrugating to check soil drifting. Rapid recovery and additional growth was made following the beneficial snow on March 24, but most of the top growth was again injured or killed back by soil drifting on March 30 and 31.

Lawns are becoming quite green, and crested wheatgrass has commenced growth. The unusually mild weather also caused cottonwoods and other early trees and shrubs to start budding.

Work in the field commenced three to four weeks earlier than usual, and practically all small grain in this section of the State was seeded before the end of the month. Spring plowing, duckfooting and disking of rotation plots were completed by March 21, but owing to the dry, powdery condition of the surface soil, and insufficient moisture for germination of seed, the plots were not harrowed down for seeding until after soil moisture conditions were improved by the precipitation received on March 24. Other field work consisted of corrugating and cultivating to check soil blowing.

Maximum temperature, 69°; minimum, 8°; precipitation, 0.60 inch.

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NOTE.

This news letter will be followed by one for the period April 1 - 9, after which weekly news letters will be resumed.

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